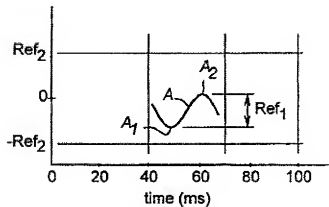


### REMARKS/ARGUMENTS

The rejections presented in the Office Action dated December 6, 2007 (hereinafter Office Action) have been considered. Claims 1-61 have been canceled and new claims 62-119 have been added. Allowance of the application in view of the present response is respectfully requested.

Applicant does not acquiesce to the rejections of now canceled claims 1-61. However, to expedite allowance of the application, new claims 62-119 are offered to enhance understanding of Applicant's invention as set forth in these claims. The reference previously asserted against now canceled claims 1-61, U.S. Patent No. 5,431,693 to Schroepfel (hereinafter "Schroepfel"), does not anticipate or render obvious new claims 62-119. The combination of Schroepfel along with additional references (US 6,226,551 to Zhu et al, and/or US 5,531,693 to Lindgren) does not render these new claims obvious. New claims 62-119 are not anticipated or rendered obvious at least for the reason that the asserted reference or reference combinations fail to describe each element of the claims.

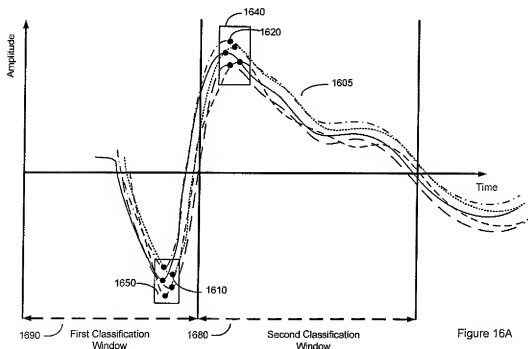
Schroepfel's method of capture detection is represented by Figure 8, which is provided below.



**FIG. 8**

Schroepfel describes determining the peak to peak distance between minimum and maximum peaks ( $A_1$  and  $A_2$ ) detected within a 40 to 70 ms interval following delivery of the pacing pulse. If the measured peak to peak distance is greater than a first reference value ( $Ref_1$ ) and the amplitude of the signal does not exceed a second reference value ( $Ref_2$ ) during a 70 to 100 ms interval, then the pacing response is determined to be a captured response.

In contrast to Schroepfel's process, independent claims 62, 89, and 118 describe classifying a cardiac response as capture in response to a first cardiac signal peak falling within a first capture detection region and a second cardiac signal peak falling within a second capture detection region. Figure 16A from Applicant's disclosure, which is reproduced below for convenience, illustrates an embodiment of this approach.



The approach described by Schroepfel is distinguishable from the invention of claims 62, 89, and 118 at least because Schroepfel does not teach or suggest classification of capture

in response to detection of the first signal peak 1610 within the first capture detection region 1650 and detection of the second signal peak 1620 within the second capture detection region 1640. As previously described, Schroepfel only tentatively determines capture based on the peak to peak distance within a 40 to 70 ms interval and then confirms capture is the signal amplitude does not exceed a threshold during a 70-100 ms interval

Schroepfel also does not teach triggering sensing for a second cardiac peak within a second capture detection region in response to detection of the first signal peak within the first detection region. Schroepfel describes determining the peak to peak distance in a first interval of time (40-70 ms) following delivery of the cardiac stimulation pulse and also measuring the amplitude in a second interval of time (70-100 ms). (see, Abstract). Although Schroepfel describes first and second intervals of time, Schroepfel does not teach a *triggerable second detection region*. Sensing in Schroepfel's second time interval always occurs, and thus the second interval is not established *in response to* detection of a first cardiac signal peak within a first detection region as recited in Applicant's independent claims.

The Office Action states on page 4 that "the additional window is used to confirm either capture or non-capture." Thus, according to Schroepfel's approach, the 70-100 ms interval is always used, either to confirm capture or to confirm non-capture. If sensing in the 70-100 ms interval always occurs, then sensing in this interval is not *conditionally triggered* as is sensing in the second detection region as recited in Applicant's independent claims.

Because Schroepfel fails to describe all of the elements of claims 62-119, the reference fails to support an anticipation rejection for any of these claims. Furthermore, the references previously used in combination with Schroepfel do not overcome the deficiencies of Schroepfel at teaching the missing elements, therefore, these combinations also fail to support rejection of the claims.

Applicant respectfully asserts that claims 62-119 are in condition for allowance. Regarding the Office Action mailed December 6, 2007, Applicant does not acquiesce to Examiner's characterization of the asserted art or Applicant's claimed subject matter, nor of

the Examiner's application of the asserted art or combinations thereof to Applicant's claimed subject matter. Moreover, Applicant does not acquiesce to any explicit or implicit statements or conclusions by the Examiner concerning what would have been obvious to one of ordinary skill in the art, obvious design choices, alternative equivalent arrangements, common knowledge at the time of Applicant's invention, officially noticed facts, and the like. Applicant respectfully submits that a detailed discussion of each of the Examiner's rejections beyond that provided above is not necessary, in view of the clear absence of teaching and suggestion of various features recited in Applicant's pending claims and lack of motivation to combine reference teachings. Applicant, however, reserves the right to address in detail the Examiner's characterizations, conclusions, and rejections in future prosecution.

Authorization is given to charge Deposit Account No. 50-3581 (GUID.142PA) any necessary fees for this filing. If the Examiner believes it necessary or helpful, the Examiner is invited to contact the undersigned attorney to discuss any issues related to this case.

Respectfully submitted,

HOLLINGSWORTH & FUNK, LLC  
8009 34<sup>th</sup> Avenue South, Suite 125  
Minneapolis, MN 55425  
952.854.2700

Date: 09/22/2008

By: 

Clara Davis  
Reg. No. 50,495